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Meet the Inventors

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XCAT phantom CT projector

The XCAT, MOBY, and ROBY phantoms include a great amount of anatomical detail that make them suitable for use in high-resolution CT imaging research. To simulate CT imaging process, we developed a CT projector that generates x-ray projections directly from surface definitions of a given phantom without using voxelization. It takes output from the XCAT, MOBY, and ROBY phantoms and will generate x-ray projections given user parameters defining the scanner. The program can simulate parallel, fan, or cone-beam projections using monochromatic or polychromatic x-ray energy spectra and includes a model for quantum noise.

